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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,840

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John G. Speer

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25928

7590

03/05/2008

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EXAMINER

YANG, JIE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/526,840

Applicant(s)

SPEER ET AL.

Examiner

JIE YANG

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/88)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-8 are pending in application.

Status of the Previous Rejections

Previous rejection of claims under 35 U.S.C. 102(b) as anticipated by Osamu Kawano et al (U.S 6,319,338, thereafter US'338. Misidentified in the previous Action marked 07/20/2007 as Koyama et al.) is maintained in view of the applicant's arguments/remarks filed in 01/21/2008 to the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, are rejected under 35 U.S.C. 102(b) as anticipated by Osamu Kawano et al (U.S 6,319,338, thereafter US'338).

US'338 is applied to the claims 1-8, for the same reason as stated in the previous rejection dated 7/20/2007.

Response to Arguments

Applicant's arguments filed on 01/21/2008 with respect to claims 1-8 have been fully considered but they are not persuasive.

Applicant's arguments are summarized as follows:

1, Regarding independent claim 1, Kowano, et al. does not teach or otherwise disclose "quenching and partitioning" as claimed by the applicant. To be sure, Kowano, et al. makes no distinction between quenched martensite and "partitioned martensite".

2, still regarding claim 1, Kowano, et al. teaches that bainite is the preferred means of creating the retained austenite. The use of bainite teaches around the focus of the claimed invention.

3, still regarding claim 1, the difference between the Kowano, et al. methodology and that claimed within claim 1 are substantial and significant. Kowano, et al. teaches none of the relevant aspects of the quenching and partitioning process, such as the claimed austenite stabilization by carbon that was present in martensite.

Responses are as follows:

Regarding arguments 1 and 3, as pointed out in the previous office action marked on 7/20/2007, Kowano, et al. teaches quenching to obtain martensite (Col. 14, Line 33-44); Kowano, et al. teaches "carbon partitioning step" recited in the instant claim 1, for example, "... to obtain the necessary amount of

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retained austenite; the holding time range was from 15sec to 20 min. The holding at 150 °C to 500 °C..." (Col.14, Line 45 to Col.15, Line 12; Claim 9 of US'338). Kowano, et al. teaches the similar annealing temperature (780-800 °C for #16-40 of US'338), the similar quenching temperature (200-400°C for #16-40 of '338), and the similar partitioning temperature (300-400 °C for #16-40 of '338) to heat treat the similar steel alloy as recited in the instant application. Therefore, it would inherently lead to the similar microstructure (MPEP 2112 IV), which includes the difference between the "quenching martensite and partition martensite", and also includes the effect of "austenite stabilization by carbon that was present in martensite".

Regarding argument 2, Kowano et al. teaches cooling the heated steel at a cooling rate from 10°C/sec to 200 °C/sec and holding at 150°C to 450 °C. At lower than 150 °C, virtually all of the remaining austenite remaining untransformed is transformed to martensite. Between 150°C to 450 °C, partial of martensite are formed (Col.14, lines 33-44 of US'338). Therefore, the martensite limitation in the instant claim would be anticipated by US'338.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-270-1884. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/
Supervisory Patent Examiner, Art Unit 1793